

Upper Respiratory Tract Infections

Jim Walls – 12/6/2013

Common Cold³

- S/sxs: fever, cough, rhinorrhea, nasal congestion, sore throat, HA, myalgias
- Treatment:
 - o Antibiotics should not be used ^(A)
 - o OTC cough and cold meds should not be used for children < 4 ^(B)
 - o Buckwheat honey, pelargonium sidoides extract, nasal saline irrigation, vapor rub, or zinc sulfate may decrease cold sxs in children ^(B)
 - o **Codeine is not effective for cough in adults** ^(A)
 - o Antihistamine monotherapy not effective in adults ^(A)
 - o Decongestants, antihistamine / decongestant combo, and intranasal ipratropium may improve sxs in adults ^(A)
 - o NSAIDs reduce pain 2/2 URI in adults ^(A)
 - o Andrographis paniculata and P. sidoides may reduce severity and duration of cold sxs ^(B)
 - o Combination cold medications, including antihistamine/decongestant/analgesic, antihistamine/analgesic and analgesic/decongestant formulations provide modest sxs relief for children and adults, **BUT analgesic/decongestant formulations have increased risk of adverse effect** ^{(B) 4}

Bronchitis¹

- Most common dx of pt's presenting to clinic w/ cough
- Self limited infxn w/ cough as the primary sx
- Typically **lasts 3 weeks** vs. only 7-10 days for cold
- Etiology:
 - o 90% viral: adenoV, coronaV, influenza A&B, metapneumoV, parainfluenza, RSV, rhino
 - o 10% bacterial: Chlamydia pneumonia, Mycoplasma pneumonia, Bordetella pertussis
- PNA r/o'd by lack of fever, tachypnea, tachycardia, or lung findings on exam
 - o For older pts, lower threshold for CXR
- Unlike common cold, no coryza
- **Abx should not be routinely used** ^(B)
 - o If pertussis suspected, should treat w/ macrolide to reduce transmission, but will not shorten duration of sxs
 - o NNT w/ abx to prevent a PNA after bronchitis is 119 for 16-64 y/o pts
- Treatment
 - o antitussives in patients **≥ 6 yrs old** ^(C)
 - o beta-agonist inhalers **in pts w/ wheezing** ^(B)
 - o high dose inhaled corticosteroids ^(B)
 - o echinacea ^(B)
 - o pelargonium sidoides ^(B)
 - o dark honey in children ^(B)

- **no expectorants** ^(B)
- Differential: allergic rhinitis, asthma, COPD, common cold, CHF, GERD, malignancy, PNA, postinfectious cough, postnasal drip, sinusitis

Rhinosinusitis²

- **Usually 2/2 virus** such as adenoV, rhinoV, influenza or parainfluenza
- Bacterial etiology: Strep pneumo, H. flu, S. aureus, Moraxella
- Pathophys: mucosal edema ⇒ obstruction of sinus ostia, and viral and/or bacterial impairment of cilia
- Diagnosis:
 - sxs s/p URI [Sn 89%, Sp 79% for pt p/w sinusitis sxs]
 - facial pain, pressure or fullness (pain on bending forward) [75, 77]
 - purulent rhinorrhea [35, 78]
 - maxillary toothache [66, 49]
 - nasal obstruction [35, 60]
- **Imaging is not recommended** unless considering alternative diagnosis ^(C)
- **Treatment** of mild (aka viral) illness ^(A):
 - supportive care, analgesics
 - short-term decongestants
 - saline nasal irrigation
 - intranasal corticosteroids
- **No abx** except: ^(B)
 - > 10 days duration
 - worsens after 5-7 days
 - moderate illness (mod to severe pain or fever ≥ 101°F)
 - immunocompromised
- Amoxicillin is 1st line therapy for bacterial rhinosinusitis ^(A). TMP-SMX and macrolides reasonable alternative if allergic to amox ^(C).
- Antihistamines not recommended

Croup (Laryngotracheitis)⁶

- Mostly seen in **children**, rarely in adults, rarely younger than 3 months old
- **Abrupt onset** of hoarseness and **barking cough** and varying degrees of respiratory distress (nasal flaring, retractions, **stridor**)
- **Benign condition**, low mortality rate
- Viral etiology – **parainfluenza** (50-75%), influenza A&B, RSV, adenoV, rhinoV, enteroV and bocaV.
- Differential
 - Bacterial tracheitis – more **toxic**, higher fevers, does not respond to usual croup treatments, sometimes a secondary infection of viral croup
 - Epiglottitis – **toxic**, anxious, sore throat, **drooling**, leaning forward, **typically absence of croupy cough**, hx of no vaccination against H. flu.
 - Other: foreign body, peritonsillar or retropharyngeal abscess, and angioedema

- Treatment – **dexamethasone** ^(A) +/- nebulized epinephrine for severe cases ^(A). No benefit to humidification therapy ^(A).

Pharyngitis⁵

- Peak season late winter and early spring
- Viral etiology – most common - suggested by coryza, conjunctivitis, malaise/fatigue, hoarseness, and low grade fever
 - o Infectious mononucleosis
 - commonly w/ posterior cervical LAD and possible HSM
 - Monospot [Sn 86%, Sp 99%] – more sens in 2nd wk than 1st wk
 - > 10% atypical lymphocytes [Sp > 92%]
 - if treated w/ amox or amp, 90% will develop maculopapular rash
- Bacterial etiology
 - o **generally DO NOT have conjunctivitis, rhinorrhea or cough**
 - o GABHS most common

Strep score – McIsaac

| | |
|---------------------------------|----|
| - Fever | 1 |
| - Lack of cough | 1 |
| - Ant cerv LAD | 1 |
| - Tonsillar swelling or exudate | 1 |
| - Age | |
| o < 15 | 1 |
| o 15 - 45 | 0 |
| o > 45 | -1 |

-1 – 0 = Strep ruled out
 1 – 3 = Order rapid strep
 4 – 5 = Treat empirically

- sxs may include erythema, swelling, tonsular exudate, edematous uvula, palantine petechiae and anterior cervical LAD
- Untreated: lasts 7 – 10 days, infectious during acute phase and 1 week after
- Treatment ⇒ infectious for only 24 hours, reduces sxs by only 1 day, prevents complications
 - scarlet fever
 - rheumatic fever
 - peritonsillar abscess
 - post-streptococcal glomerulonephritis (abx does not prevent)
- Centor and McIsaac scores – based on criteria of age, fever, lack of cough, tender anterior cervical LAD and tonsillar swelling or exudate
- Rapid Strep [Sn 80-97%, Sp >95%]

o Other bacteria

- Gonococcal – greenish exudate, dysuria, fever
- Diphtheria – adherent grayish membranes with surrounding inflammation of the tonsils, pharynx or nasal passage
- Throat culture [Sn 97%, Sp 99%]

- Other etiology : Kawasaki disease

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- 5) Vincent MT, Celestin N, Hussain AN. (2004). Pharyngitis. *Am Fam Physician*, 69(6), 1465-70.
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